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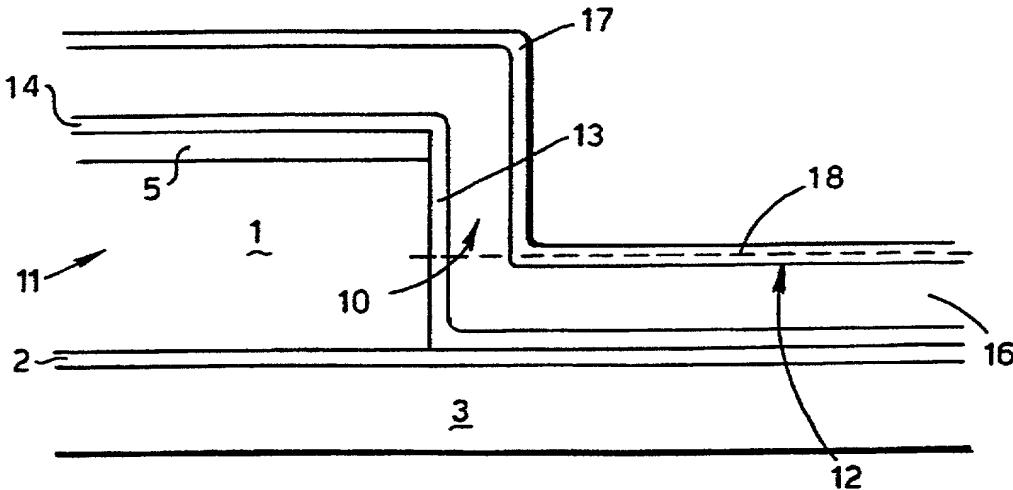
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- (71) Applicant (*for all designated States except US*): BOOKHAM TECHNOLOGY PLC [GB/GB]; 90 Milton Park, Abingdon, Oxfordshire OX14 4RY (GB).
- (72) Inventors; and (75) Inventors/Applicants (*for US only*): RICKMAN, Andrew, George [GB/GB]; St. Katherines Lodge, Savernake Forest, Marlborough, Wilts SN8 3NG (GB). HARPIN, Arnold, Peter, Roscoe [GB/GB]; 58 Stratford Street, Oxford OX4 1SW (GB).

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(54) Title: WAVEGUIDE JUNCTION WITH SILICON NITRIDE



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(57) Abstract: A junction structure between a semiconductor waveguide region and a first dielectric forming a further waveguide region of lower refractive index than the semiconductor waveguide region. The structure includes a light transmitting semiconductor layer which has an end face at the junction and a substrate below the semiconductor layer which extends beyond the junction and a first dielectric light transmitting layer formed over the extending part of the substrate and extending in alignment with the semiconductor layer to provide the further waveguide region. A second dielectric layer of refractive index below that of the two waveguide regions is formed over the end face of the semiconductor and over the extending part of the substrate. In this way a support layer is formed having a required thickness for the further waveguide region to provide the required alignment of the optical access through the two waveguide regions.